



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| | | | | |
|--|--------------|----------------------|---------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 09/511,526 | 02/23/2000 | Barry W. Jones | 99ec019/76257 | 4196 |
| 7590 | 01/15/2004 | | EXAMINER | |
| Welsh & Katz LTD 120 South Riverside Plaza 22nd Floor Chicago, IL 60606 | | | PHILPOTT, JUSTIN M | |
| ART UNIT | PAPER NUMBER | 2665 | | |

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|--------------------------------------|-------------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/511,526 | JONES, BARRY W. |
| | Examiner Justin M Philpott | Art Unit 2665 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 30 October 2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16, 18-46 and 48-56 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-16, 18-46 and 48-56 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In the Amendment filed October 30, 2003, applicant has amended claims 1, 16, 18, 35, 45 and 48 to correct minor informalities, and has additionally amended independent claims 1, 16, 35 and 45 to include further limitations in an attempt to overcome the previous prior art rejections. Applicant argues that independent claims 1, 16, 35 and 45 should be allowed in view of the newly added limitations. Applicant fails to comment on rejected independent claims 55 and 56 as originally filed.

In view of the Amendment, claims 18, 19 and 48-54 are no longer objected to. However, claims 1-56 remain rejected in view of previously cited prior art for reasons discussed herein.

Response to Arguments

2. Applicant's arguments filed October 30, 2003 have been fully considered but they are not persuasive.

Applicant argues (pages 15-16) that Putnins fails to teach the limitation of "determining whether the exchanged information in each successive slot should be compressed or decompressed based upon a status of specific bit locations of the respective address data for the exchanged information" as newly recited in the amended claims 1, 16, 35 and 45. Applicant continues, alleging that all voice messages in Putnins have the same predetermined level of compression and, therefore, Putnins would not perform the above-mentioned "determining" step. However, contrary to applicant's argument, Putnins clearly teaches a plurality of different levels

of compression. Specifically, Putnins teaches at least three specific levels of voice compression may be accommodated, including level 1, level 2, and no compression (e.g., see col. 5, lines 6-25, as well as tables of FIGS. 4 and 5). Furthermore, Putnins teaches look-up tables (e.g., 100 and 110, see col. 5, line 26 – col. 6, line 59) within memory 90 (e.g., see FIG. 3) are utilized to provide instructions for controlling the amount of compression (e.g., according to column 108). Specifically, Putnins teaches a signal may be routed to ASM 74 in one direction for compressing the voice messages according to specific levels (e.g., see col. 5, lines 6-16) or may be routed in another direction to ASM 74 for decompressing the signal (i.e., “expand[ing] received voice messages to ‘normal’ bandwidth”, see col. 5, lines 18-20). Signal routing is performed by T1/E1 modules 64 and 66 being controlled by DSM 84 coupled to the above-mentioned memory 90. Finally, Putnins teaches the destination address (e.g., columns 102/112 of tables 100/110) of each message determines whether the information should be compressed or decompressed (e.g., see FIGS. 4 and 5), wherein each destination address implicitly comprises specific bit locations uniquely identifying the address which are utilized for the determining step. Thus, contrary to applicant’s argument, Putnins teaches the above-mentioned limitation of the amended independent claims 1, 16, 35 and 45. Therefore, applicant’s arguments are not persuasive.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 2665

4. Claims 1-16, 18-46 and 48-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,841,771 to Irwin et al. in view of U.S. Patent No. 5,825,779 to Putnins et al.

Regarding claims 1, 16, 35, 45, 46 and 55, Irwin teaches a method of exchanging information between at least some slots of a first T-carrier and some other non-coincidental slots of a second T-carrier (e.g., see col. 14, lines 10-20 and FIGS. 5-7), comprising the steps of: exchanging information between successive slots of the first T-carrier and respective predetermined memory locations within a memory device (e.g., see col. 48, lines 59-63 and col. 15, lines 12-63, particularly lines 28-30), and exchanging information between successive slots of the second T-carrier and at least some of the predetermined locations in memory of the first T-carrier based upon a channel exchange list (e.g., see col. 48, line 65 – col. 49, line 7, and channel connection mapping in col. 43, lines 36-51) relating at least some channels of the first T-carrier to at least some other channels of the second T-carrier. However, Irwin may not specifically disclose compressing information.

Putnins also teaches a method of exchanging information and, further, teaches compressing information. Specifically, Putnins teaches various levels of compression are selected for the information (e.g., see col. 2, line 9 – col. 3, line 25). Furthermore, Putnins teaches look-up tables (e.g., 100 and 110, see col. 5, line 26 – col. 6, line 59) within memory 90 (e.g., see FIG. 3) are utilized to provide instructions for controlling the amount of compression (e.g., according to column 108). Specifically, Putnins teaches a signal may be routed to ASM 74 in one direction for compressing the voice messages according to specific levels (e.g., see col. 5, lines 6-16) or may be routed in another direction to ASM 74 for decompressing the signal (i.e.,

“expand[ing] received voice messages to ‘normal’ bandwidth”, see col. 5, lines 18-20). Signal routing is performed by T1/E1 modules 64 and 66 being controlled by DSM 84 coupled to the above-mentioned memory 90. Finally, Putnins teaches the destination address (e.g., columns 102/112 of tables 100/110) of each message determines whether the information should be compressed or decompressed (see FIGS. 4 and 5), wherein each destination address implicitly comprises specific bit locations uniquely identifying the address which are utilized for the determining step. The teachings of Putnins provide for an improved system wherein different levels of quality of service can be maintained for particular information (wherein quality of service corresponds to compression level, e.g., see col. 3, lines 14-20). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Putnins to the method of Irwin in order to provide an improved system wherein different levels of quality of service for information are maintained.

Regarding claims 2, 22 and 36, Irwin teaches incrementing a first counter (e.g., write counter 221 in FIG. 3) coincident with a slot progression of the first T-carrier (e.g., see col. 11, lines 8-10).

Regarding claims 3, 23 and 37, Irwin teaches resetting the first counter (e.g., reset input 223 in FIG. 3) upon detecting a first slot of a repeating multi-frame of the first T-carrier (e.g., see col. 11, lines 10-13).

Regarding claims 4, 8, 9, 24, 28, 29, 41 and 42, Irwin teaches receiving read/write addresses at a memory controller, wherein the addresses are used as memory pointers each identifying a specific block of memory (e.g., see col. 17, lines 45-57). Specifically, Irwin teaches an incoming header (A) is examined in order to fetch a memory pointer (P) that identifies

the location for storing the incoming cell payload within the memory (e.g., see col. 18, lines 1-19). By including a cell table (e.g., 481 in FIG. 6) comprising the incoming header (A) coupled with the first counter (e.g., write counter 424, see also col. 16, lines 10-11), the predetermined memory locations (e.g., specific blocks of memory) are determined. That is, Irwin teaches adding an output of the first or second counter to a base memory address to determine the predetermined memory locations of the first or second T-carrier by coupling a counter (e.g., 424) with a base address (A, P) to determine the memory locations (e.g., specific blocks of memory) of the T-carrier.

Regarding claims 5, 25 and 38, Irwin teaches a channel-exchange list (e.g., list of addresses, see col. 43, lines 36-51) provided by a channel connection mapping, i.e., a look-up table.

Regarding claims 6, 26 and 39, Irwin teaches incrementing a second counter (e.g., read counter 225 in FIG. 3) coincident with a slot progression of the second T-carrier (e.g., see col. 11, lines 25-29).

Regarding claims 7, 27 and 40, Irwin teaches resetting the second counter (e.g., counter reset 227) upon detecting a first slot of a repeating multi-frame of the second T-carrier (e.g., see col. 11, lines 29-32).

Regarding claims 10-12, 30, 31 and 43, Irwin teaches the first T-carrier is a plurality of T-carriers (e.g., see “any of the 1-n lines 415”, col. 15, lines 25-26 and FIG. 6).

Regarding claims 13 and 32, Irwin teaches coupling the second T-carrier to a T-carrier interface device (e.g., ports 511-517, see FIGS. 7 and 9).

Regarding claims 14 and 33, Irwin teaches locating the plurality of predetermined memory locations in a plurality of memory devices (e.g., buffer memory 560 and DS0 memory 520 in FIG. 7).

Regarding claims 15, 34 and 44, Irwin teaches multiplexing the information (e.g., see MUX 411 and DEMUX 412 in FIG. 6).

Regarding claims 18 and 19, Putnins teaches a compression status list (e.g., see FIGS. 4 and 5) comprises compressed information and uncompressed information (e.g., levels 1 and 2 compression as well as zero/none level of compression).

Regarding claims 20, 21, 47 and 56, as discussed above regarding claims 1, 16, 35, 45, 46 and 55, Putnins teaches compressing information wherein following transmission the system implicitly de-compresses the information prior to processing or overwriting memory locations.

Regarding claims 48 and 49, Irwin teaches selecting a slot of the T-carrier interface device and locating the respective predetermined channel locations of the memory device (e.g., see col. 14, lines 10-40). Further, regarding claim 49, Irwin teaches the step of locating the predetermined channel locations of the memory device comprises entering a lookup table (e.g., block of memory, see col. 17, line 45 – col. 18, line 23; see also cell table 481 in FIG. 6) using an identifier of the selected slot (e.g., header A, see col. 18, lines 1-19) of the T-carrier interface device as an index into the lookup table and retrieving an identifier (e.g., memory pointer P, see col. 18, line 11) of a corresponding memory location.

Regarding claims 50-52, Irwin teaches the step of retrieving a corresponding memory location comprises selecting a memory device of a plurality of memory devices (e.g., buffer memory 560 and DS0 memory 520 in FIG. 7). Further, regarding claim 51, Irwin teaches

retrieving an identifier (e.g., memory pointer P, see col. 18, lines 1-19) of a memory device.

Further, regarding claim 52, Irwin teaches routing performed via a multiplexer (e.g., see MUX 411 and DEMUX 412 in FIG. 6).

Regarding claims 53 and 54, the step of exchanging information comprises multiplexer 415 and buffers 460, 428 and 429 (see FIG. 6), which implicitly comprises performing serial to parallel or parallel to serial conversion.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

Art Unit: 2665

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.


Justin M Philpott



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600